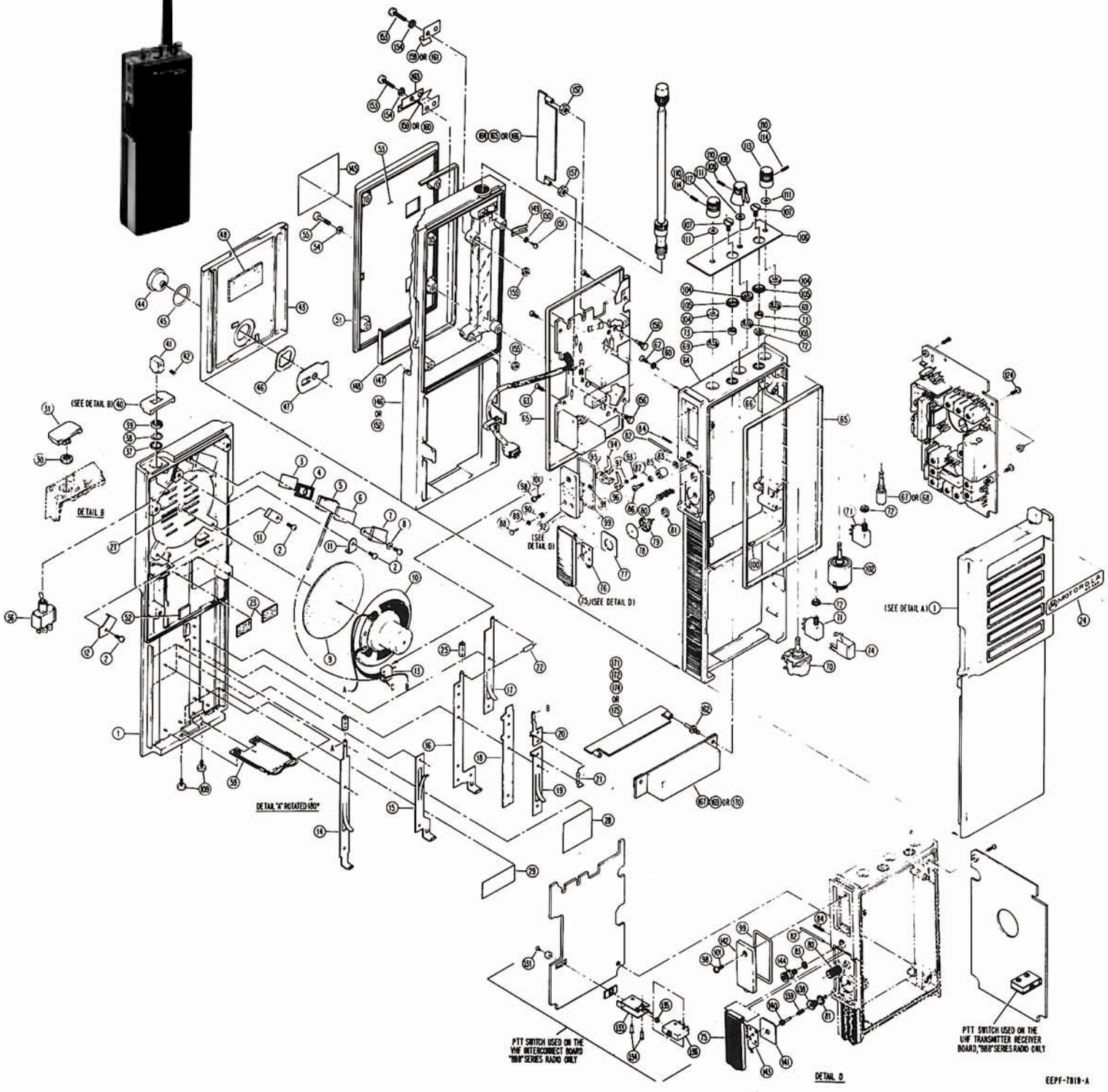
MOTOROLA

MT500 Series

Parts List



H23BBB, H33BBB, H23BBU, H33BBU, H24BBB, H34BBB, H24BBU, H34BBU

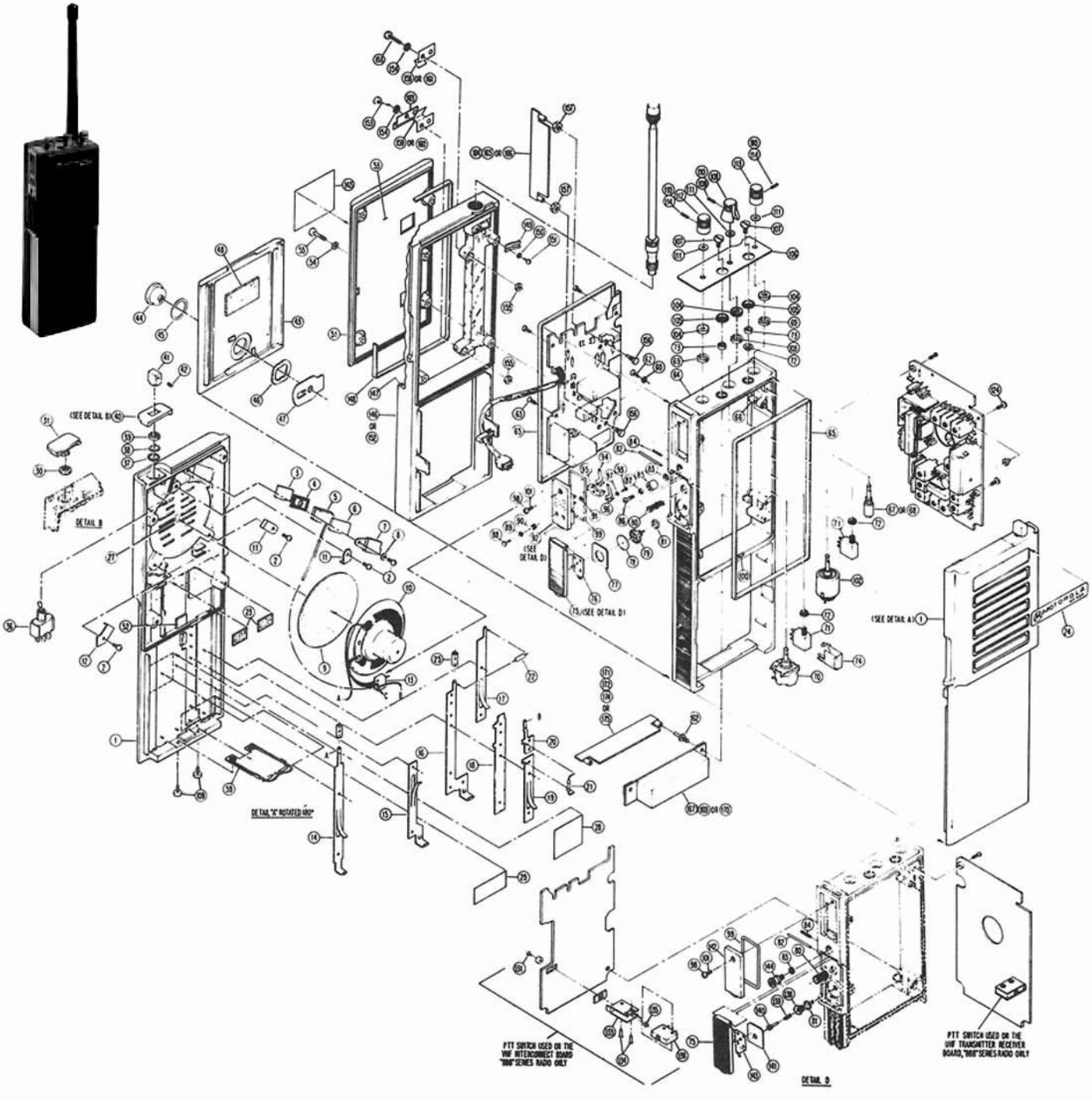
REF. NO.	PART NO.	DESCRIPTION
1	**1505660D01**	Front Cover (Slimline Extended, Omni Extended)
	1505633D01	Front Cover (Slimline Short, Omni Short)
2	**0300138651**	Machine Screw (2-56 x ⅛″ Phillips Pan Hd)
3	**3505450B01**	Felt, Mic
4	**3282744J02**	Mic Gasket (Slimline Extended, Omni Extended, Omni Short)
5	**5982575J02**	Mic Cartridge
6	**7582745J02**	Pad Clamp
7	**0705672D01**	Mic Bracket
8	**0405314E01**	Washer, Spring
9	**3505370C01**	Cloth Felt Grille
10	**5005334D01**	Speaker
11	**4205670D01**	Clamp, Speaker
12	**4205671D01**	Clamp, Speaker
13	**0105956C63**	Recept, Conn Assembly, Short Frame
13	**0105958C87**	Recept, Conn Assembly, Extended Frame
14	**4205573A01**	Strap, Contact Neg
15	**4205575A01**	Contact, Sen
16	**4205283E01**	Strap Contact Charge
17	**4205576A01**	Strap Contact
18	**1405282E01**	Contact
19	**4205269G01**	Strap Contact Positive
20	**4205573A01**	Strap Contact Positive
21	**6505214E01**	Fuse
22	**4880388B70**	Rectifier, Silicon
23	**1482392E05**	Insulator Paper
24	**3305537E01**	Name Plate
27	**1110019A88**	Adhesive, Silicone Rubber
28	**1300868710**	Label, Patent
30	**3205315E01**	Gasket, Plug
31	**3805115E01**	Plug, Cover
36	**4005061E01**	Switch, Toggle, SPDT
37	**3205082E01**	Gasket, “O” Ring
38	**0405081E01**	Washer, Special
39	**0205050E03**	Nut, mtg
40	**1305057E07**	Escutcheon, Switch
41	**3605114E01**	Knob, Switch
42	**0383174C04**	Screw, Set
43	**1505697D01**	Cover, Battery
44	**3805908D01**	Button
45	**0405910D01**	Washer
46	**0405316E01**	Washer Spring
47	**5505907D01**	Latch
48	**7505083E01**	Pad
50	**2605045E01**	Shield, Antenna Tube (Slimline Extended, Slimline Short)
51	**1505698D01**	Cover, Rear (Slimline Short)
	1505943D01	Cover, Rear (Omni Extended)
	1505039E01	Cover, Rear (Slimline Extended)
	1505699D01	Cover, Rear (Omni Short)
52	**7505083E01**	Pad (Omni Extended, Omni Short)
53	**7505533F02**	Pad (Omni Extended, Omni Short)
54	**0484345A06**	Washer Seal
55	**0305662D09**	Screw, Captive (Slimline Extended, Slimline Short)
	0305662D11	Screw, Captive (Omni Extended, Omni Short)
56	**0300139444**	Latch, Screw
57	**1405359E01**	Insulator, Contact (Slimline Extended, Slimline Short)
59	**NLN4181A**	Latch Assembly (Slimline Extended, Slimline Short)
	NLN4182A	Latch Assembly (Omni Extended, Omni Short)
62	**0300138661**	Screw, Mach (2-56 x 3⁄16″)
63	**0300136666**	Screw, Mach (2-56 x ¼″)
64	**0705640D01**	Frame, Extended (Slimline Extended, Omni Extended)
	0705547D01	Frame, Short (Slimline Short, Omni Short)
65	**3282172J11**	Gasket, Frame (Slimline Extended, Slimline Short, Omni Short)
	3205744J01	Gasket, Frame (Omni Extended)
66	**4305661D01**	Bushing, Cover mtg
67		
68	**1805333E01**	Pot Cermet Alternate
69	**0282653D03**	Nut, Special
70	**REX4060A**	Potentiometer Control Switch
71	**0905786J01**	Jack, Micro
72	**4305052E02**	Bushing, Shoulder
73	**0205050E01**	Nut, Special
74	**2605054E01**	Shield, Antenna
75	**4505784D01**	Lever
76	**4105783D03**	Spring, Actuator (PTT)
77	**RPX4217A**	Gasket (PTT)
78	**3905834K07**	Contact, Disc (PTT)
79	**3905195G01**	Contact, Feed-thru (PTT)
80	**3205082E02**	Seal, “O” Ring
81	**4105267E01**	Spring, Compression
82	**2205084E01**	Pin, Spring
83	**0405249E01**	Washer, Insert
84	**0305246E01**	Screw, Set
85	**4305781D01**	Insert, Threaded
86	**4605154E01**	Stud
87	**0405248E01**	Washer, Stud
88	**3905456F01**	Pin, Contact
89	**3205082E03**	Gasket, “O” Ring
90	**4105424F03**	Spring, Compression
91	**4205463E02**	Ring, Retaining

(Continued on page 71)

MOTOROLA

MT500 Series

Parts List



(Continued from page 69)

H23BBB, H33BBB, H23BBU, H33BBU, H24BBB, H34BBB, H24BBU, H34BBU

REF. NO.	PART NO.	DESCRIPTION
92	**0905677D03**	Receptacle
93	**0300139684**	Screw (0-80 x ⅛″ Fill Hd)
94	**4105197G03**	Contact
95	**4605072E01**	Block (Slimline Extended, Slimline Short, Omni Short, Omni Extended)
96	**4105197G01**	Contact
97	**0400134190**	Washer
98	**0300138651**	Mach Screw (2-56 x ⅛″ SST)
99	**3205661G01**	Seal, “O” Ring
100	**1110019A88**	Adhesive, RTU Silicone Rubber (Omni Extended, Slimline Short, Omni Short)
101	**1110019A63**	Sealant Compound
102	**4005120E01**	Switch, Toggle (Slimline Short, Slimline Extended)
	4005053E01	Switch, Rotary (Omni Extended)
	4005119E01	Switch, Rotary (Omni Short)
103	**0282653D07**	Nut, Special (Slimline Extended, Slimline Short)
	0282653D05	Nut, Special (Omni Extended, Omni Short)
104	**7583562H02**	Pad, Rubber
105	**4305051E01**	Bushing, Insulator
106	**1305621D05**	Escutcheon (Slimline Extended, Slimline Short)
107	**0310129A24**	Screw, Jack
108	**3605114E01**	Knob, Switch (Slimline Extended, Slimline Short)
	3605254K05	Knob, Control (Omni Extended, Omni Short)
109	**0383174C04**	Setscrew
111	**0482418B97**	Washer, Teflon
112	**3605254K01**	Knob, Volume
113	**3605254K03**	Knob, Squelch
114	**0383174C02**	Setscrew
119	**0310129A24**	Screw, Jack (Slimline Extended, Slimline Short)
120	**7508356H01**	Pad, Rubber (Slimline Extended, Slimline Short)
121	**4305051E01**	Bushing, Insulator (Slimline Extended, Slimline Short)
122	**1305621D01**	Escutcheon (Slimline Extended, Slimline Short)
123	**7583562H02**	Pad, Rubber (Slimline Extended, Slimline Short)
124	**0482418B97**	Washer, Teflon (Slimline Extended, Slimline Short)
131	**0300139939**	Machine Screw (2-56 x ⅛″ Fit Head)
133	**0705261E01**	Bracket, Switch
134	**0505095E09**	Eyelet
136	**4005265E01**	Switch, Micro
138	**0205250E01**	Nut (PTT)
139	**4105252E01**	Spring (PTT)
140	**4705251E01**	Actuator, (PTT)
141	**3205077E01**	Gasket, Switch
142	**1505212E02**	Cover, Receptacle
143	**4105783D03**	Spring, Actuator
144	**RPX4072A**	Stud, Heat Sink
146	**1505858D01**	Housing, Sleeve (Omni Extended)
	1505651D01	Housing, Sleeve (Omni Short)
148	**3282172J11**	Gasket, Frame (Omni Extended, Omni Short)
149	**4205860D01**	Clip, Antenna
150	**0405314E03**	Spring, Washer (Omni Extended, Omni Short)
151	**0305493F01**	Machine Screw (2-56 x 3/16″)
	0305044E01	Screw, Special (Omni Extended, Omni Short)
153	**0300115356**	Machine Screw (2-56 x 5/16″)
154	**0400400139**	Lock Washer (2 split)
155	**0200115676**	Nut (2 hex)
156	**4605798E01**	Post, Guide
157	**0205797E01**	Nut
158	**4205445E04**	Clip
159	**4205445E03**	Clip
160	**4205445E02**	Clip
161	**4205445E01**	Clip
162	**4605800E01**	Screw, Guide (Omni Extended)
165	**NLN4645A**	Tone PL Deck (Universal) (Omni Short, Omni Extended)
	NLN4644A	Tone PL Deck (Basic) (Omni Short, Omni Extended)
167	**NLN4211A**	Optional Deck (Tone PL) (Omni Extended, Slimline Extended)
169	**NLN4961A**	Optional Deck (Selective Call) (Omni Extended, Slimline Extended)

MOTOROLA

MT500 Series
Portable Accessories

CHARGERS

NLN4557B

Single Unit Chargers

These units are capable of charging a battery in or out of the radio and automatically revert to a trickle charge rate when fully charged. The rapid charge battery must be used in rapid charger to attain the 1 hour charge rate. Visual indication when the battery is fully charged is provided by the rapid charger.

NLN4571B

NLN4557B Slimline, Standard Charge, 117V AC

NLN4565B Slimline, Rapid Charge, 117V AC

NLN4561B Omni, Standard Charge, 117V AC

NLN4563B Omni, Standard Charge, 220V AC

NLN4569B Omni, Rapid Charge, 117V AC

NLN4571B Omni, Rapid Charge, 220V AC

Multiple Unit Chargers

These wall or rack mounted units can accommodate up to twelve batteries or radios.

NLN4562C Omni, Standard Charge, 117V AC

NLN4570C Omni, Rapid Charge, 117V AC

NLN4572C Omni, Rapid Charge, 220V AC

NLN4562C

CHARGERS

Mounting Bracket and Leg Kits for Multi-Unit Chargers

NLN5223A Standard Rate Chargers

NLN5222A Rapid Rate Chargers

NLN5223A

Vehicular Chargers

Under the dash mounted vehicular chargers are offered with similar features to the single unit charger, except without the rapid-charge capability. Connection of an external mobile antenna to the charger provides increased radio range. An antenna adapter cable kit must be used to connect the radio antenna to the charger antenna jack during mobile operation.(Order separately).

NLN6691A

NLN6691A Slimline, Standard Charge, 6/12 VDC

NLN6892A Omni, Standard Charge, 6/12 VDC

Vehicular Antenna Adapter Cable

NKN6260A Vehicular Antenna Adapter Cable

NKN6260A

Power Cable Kits

NKN6150A 12V Input Cable

NKN6151A 12V (Lighter Receptacle Cable)

NKN6150A

Radio To Charger Antenna Cable

3083060A01 Radio To Charger Antenna Cable

MOTOROLA

MT500 Series
Portable Accessories

CHARGERS

Tuneup Cable

NKN6248A Tuneup Cable

NKN6248A

Power Amp Cable

NKN6300A Power Amp Cable, DC Negative Ground

Connector Dust Cover

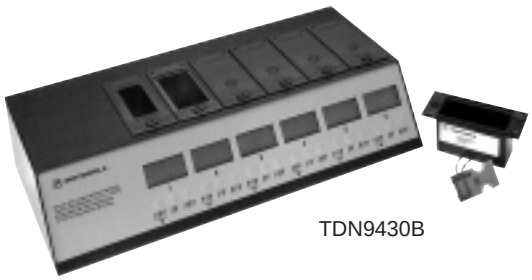
NLN5411A Universal Model Connector Dust Cover

NLN5411A

RF Adapter Cable

NKN6247A RF Adapter Cable

BATTERY MAINTENANCE SYSTEM (BMS)


TDN9430B

Using interchangeable battery adapters (order separately), the BMS is capable of charging and discharging batteries, tracking battery voltage and capacity (mAh).

TDN9430B Six Station, 110V AC, 50/60 Hz

TDN9431B Six Station, 230V AC, 50/60 Hz

TDN9720B Six Station, 110V AC, 50/60 Hz, CSA Approved

NDN4005B Three Station, 110V AC, 50/60 Hz

NDN4006B Three Station, 230V AC, 50/60 Hz

NDN4007B Three Station, 110 V AC, 50/60 Hz, CSA Approved

TDN9432A Adapter, Universal Clip Lead

TDN9527A Adapter, Universal Dip Switch

TDN9439A Adapter, 15V, 500 mAh

BATTERY DISCHARGE TESTER

Tester determines a battery's delivered capacity by discharging a fully charged battery. 'LED' indicates cycle status by turning "ON" when fully charged battery is placed in adapter and "OFF" when discharge is complete. Plug-in adapters allow one console to discharge most batteries. No AC power source required (console is powered by discharging battery).

RLN4201B

RLN4201B Single Unit Battery Discharge Tester, Requires Battery Adapter or Cable/Clip Lead

RLN4050A Battery Adapter, MT500 OMNI

RKN4041A Cable/Clip Lead, 15V

CARRYING ACCESSORIES

NLN6778B

Carrying Cases

Standard carrying cases with snap-on/off perforated full covers provide maximum protection, yet permit audio to be heard clearly. T-strap covers permit easy access to all controls. (Radios with rigid loop antenna must use T-strap cover). Sturdy black leather construction. Heavy-duty snaps on integral belt loop permit quick attachment and release (fits belts up to 2½˝). For over the shoulder carry, the adjustable sturdy black nylon carrying strapis recommended.

Standard Carrying Cases

NLN7064A Urethane Omni Long Housing Case and Cover

NLN6778B Leather Omni Long Housing Case and Cover

NLN7113A Urethane Omni Long Housing Case and T-Strap

MOTOROLA

MT500 Series
Portable Accessories

CARRYING ACCESSORIES

NLN6846B

NLN6846B Leather Omni Long Housing Case and T-Strap

NLN6777B Leather Omni Short Housing Case and Cover

NLN6845B Leather Omni Short Housing Case and T-Strap

NLN6686B Leather Slimline Short Case and Cover

NLN6686B

NLN6803B Leather Slimline Short Case and T-Strap

NLN6738B Leather Slimline Long Case and Cover

NLN6844B Leather Slimline Long Case and T-Strap

Detachable Swivel Carrying Cases

(Note: Cover, T-Strap and belt loop must be ordered separately)

Swivel carrying cases attach to belt loop attachment by inverting radio. Radio swings freely on belt loop attachment, adjusting to body movements walking or sitting. Sewn belt loop attachment fits belts up to 2½″.

1505276F02

0105953G53 Urethane Omni Long Housing Carry Case

1505276F03 Leather Omni Long Housing Carry Case

1505276F01 Leather Omni Short Housing Carry Case

1505276F02 Leather Slimline Short

1505276F04 Leather Slimline Long

CARRYING ACCESSORIES

NLN4789A

MT500 Unit ID Priority Scan Carrying Cases

NLN4789A Leather with swivel back, includes nylon hold down strap

NLN4787A Leather with standard back, includes nylon hold down strap

Touch Code Carrying Case

NLN5940A Omni, Slimline, Standard Back, includes nylon hold-down strap

NLN5941A Omni, Long, Standard Back, includes nylon hold-down strap

Button Back Cover

(not available with unit ID and priority scan)

NLN5546A Omni-Long Housing

NLN5440A Omni-Long, Multiple PL

NLN5440A

Radio can be worn on belt without carrying case by replacing conventional back cover on radio with a back cover having a permanent belt clip.

Back Cover with Belt Clip

NLN4743A Slimline, Long 3″

NLN4744A Omni, Long 3″

NLN4448A Slimline, Short 1⅝″

NLN4449A Slimline, Long 1⅝″

NLN4450A Omni, Short 1⅝″

NLN4451A Omni, Long 1⅝″

NLN4743A

NLN4449A

MOTOROLA

MT500 Series
Portable Accessories

CARRYING ACCESSORIES

Belt Loop

4205857B01 3″, Leather Belt Loop

Swivel Belt Loop

4282421J06 2½″, Swivel Belt Loop

4205857B01

Belt Loop Snap

NLN5442 Detachable Leather Belt Loop, Snap, 2½″

Full Covers

1582535J02 All Models, Leather

0105952G03 All Models, Urethane

1582535J02

4282534J01

T-Straps

4282534J01 Leather, All Models

0105952G04 Urethane, All Models

4205297G03

Hold Down Straps

4205297G03 Nylon, Standard Hold Down Strap

4205297G02 Nylon, Unit ID Hold Down Strap

4205297G02

CARRYING ACCESSORIES

Chest Pack

Chest pack keeps radio on chest for maximum hands-free operation. Ideal where body movements might expose radio to damage. Detachable straps go over shoulder and around wrist. (The basic model MT500 radio is suggested as the universal side connector is obstructed when the chest pack is used).

4284117H01 MT500 Basic

4284117H01

Belt

4200865599 All Models, 2″ Leather

4200865599

Carrying Strap

4282608H03 All Models

4282608H03

MOTOROLA

MT500 Series
Portable Accessories

AUDIO ACCESSORIES

All accessories listed are compatible with Universal models. Only the NSN6008 Lapel Speaker and the NSN6011 Earpiece are compatible with Basic models.

NSN6008A Lapel Speaker

NSN6008A

5083693B04 Earpiece With Volume Control

5005178K01 Earpiece Without Volume Control

5083693B04

NMN6081A Speaker/Mic With Clip Back and Straight Cord

NMN6082A Speaker/Mic With Clip Back and Coil Cord

NMN6083A S.M.A. with Velcro Back (For UHF Models Only–Order Antenna Separately)

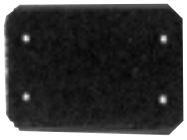
NMN6089A Speaker/Mic Quick Disconnect; Requires NLN4477A Adapter

NMN6082A

NLN8410A Velcro Patch Pin Attachment

4205832A01 Epaulet Strap

NMN6050A Safety Helmet Headset/Microphone



NLN8410A

NMN6050A

5084972H01 Earpiece Headset/Microphone

NLN4461A Required adapter for NMN6050A and 5084972H01

AUDIO ACCESSORIES

NMN6064A Noise Cancelling Headset/With Boom Mic (Requires NLN4477A)

NMN6065A Noise Cancelling Headset/With Cup Mic (Requires NLN4477A)

NLN4477A Quick Disconnect Adapter for NMN6089A, NMN6065A, NMN6064A

NMN6064A

Epaulet Strap

Black leather epaulet straps secure remote speaker microphones to epaulet of shirts or jackets and attach around cord. Allows reliable communications in hostile environments with Velcro or clip style strap.

RLN4294A Epaulet Strap, Velcro

RLN4296A Epaulet Strap, Large Clip

RLN4294A

RLN4296A

Ear Mike

Single unit microphone and speaker worn in the ear. Eliminates the need for handheld microphones or conventional headsets. Compact, rugged design allows use under hearing protectors and protective clothing. Order cable separately.

RMN4001B Ear Mike

0180359A40 Interface Cable for MT500

0180359A51 Optional PTT Ring Switch for RMN4001A

RMN4001B

0180356B97 Optional PTT Ring Switch for RMN4001B Only

0180359A51

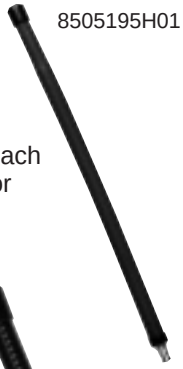
MOTOROLA

MT500 Series
Antennas, Batteries

PORTABLE ANTENNAS

Heliflex

Heliflex antennas are especially practical where antenna height considerations are present because of their short and flexible design. Each antenna is tested and tuned to provide excellent reception and transmission. Each antenna is color coded on the connector indicating frequency.



8505195H01

8505195H01 .....30-35 MHz
8505195H02 .....35-40 MHz
8505195H03 .....40-45 MHz
8505195H04 .....45-50 MHz
8582283J05.....132-142 MHz
8582283J06.....142-150 MHz
8582283J01.....150-162 MHz
8582283J02.....162-174 MHz
8505146B03 .....406-420 MHz
8505146B04 .....450-470 MHz
8505146B05 .....470-512 MHz

8582283J05

Collapsible

Collapsible antennas extend well above body shielding for good reception and transmission. Antenna is protected from damage by collapsing inside the radio.

8505509E01 .....136-162 MHz

8505509E01

Flexible Whip

Each antenna is tested and tuned to give you maximum power and performance.

NAE6050B.....406-512 MHz

NAE6050B

PORTABLE BATTERIES

Nickel-Cadmium

Part Number: **NLN8232B***
Volts: 15V
Avg. MAH: 550
Charge: Dual
Radio style: Omni
Dimensions: 2 9/16″ x 2 3/16″ x 1 12/16″

NLN8232B

Part Number: **NLN4463B**
Volts: 15V
Avg. MAH: 550
Charge: Dual
Radio style: Omni
Dimensions: 2 9/16″ x 2 3/16″ x 1 12/16″

Part Number: **NLN4462B**
Volts: 15V
Avg. MAH: 275
Charge: Rapid
Radio style: Slimline
Dimensions: 2 9/16″ x 2 3/16″ x 1 12/16″

* Factory Mutual approved for Intrinsically Safe Models

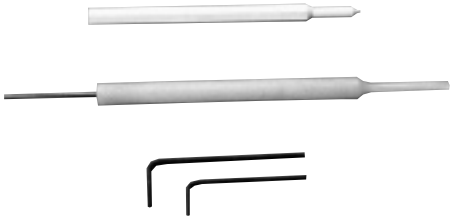
MOTOROLA

MT500 Series

Tools, Service Aids

ALIGNMENT TOOLS/SERVICE TOOLS

Alignment Tools



NLN4605A

NLN4605A Tuning Tool Kit, Consists of 6605142J01 VHF Power Amp Tuning Tool, 6605607E01 Channel Elements and tunable Coils Tuning Tool, 6683006J01, 0.06 Spline Wrench, and 6683006J02 Preselector Tuning Tool.

Service Tools

RSX4011A

RSX4011A Preselector Tuning and Power Amp Mounting Set Screw Wrench

RSX4031A Channel Element Pins Restriking Tool

5505717E01 Spanner Wrench

6680370B40 Spanner Screw Driver (functionally equivalent to 5505717E01)

5505717E01

SERVICE AIDS

RF Adapter Cable

Measure RF without a test set directly from the radio side connector of the MT500 Universal Model.

RTK4003A Test Cable, Connects to Radio Side Connector, Other End Terminated with BNC

NKN6247A Test Cable, Connects to Antenna Jack with Miniature Phone Plug, other End Terminated with BNC

RTK4003A

Radio Test Cable

Used with portable radio test set, RTX4005, for transmitter, receiver alignment and performance checks.

RTK4000A

RTK4000A Test Cable, Universal MT500 (for performance testing with covers in place)

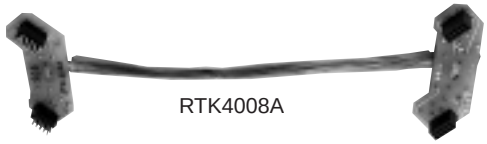
RTK4001A Test Cable, for all MT500's (testing done with covers removed)

Extender Cable

Allows transceiver board to be removed from interconnect board while operational for component level testing.

RTK4008A Extender Cable for VHF MT500

RTK4009A Extender Cable for UHF MT500



RTK4008A

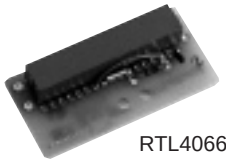
MOTOROLA

MT500 Series

Service Aids, Manuals

SERVICE AIDS

Interface Test Cable



RTL4066A

RTL4066A Test Cable, Channel Scan Bypass

Channel Scan Priority Cable

RTK4024A

RTK4024A Channel Scan Extender Cable

Programming Software

RLN4027A Software, For Programming MDC600, MDC1200, EEA, ZVEI, and CCIR Formats, Also programs Unit I.D. (requires adapter board RTL5807A)

RTL5825A Adapter Board Required for RTL4820A, Software

SERVICE MANUALS

6881020C40	Digital Private-Line Deck Supplement Manual
6881012C55	Theory/Maintenance Manual
6881019C70	Touch-Code Option Supplement

25-54 MHz

6881012C50	Models H31BBB/BBU Operating Instructions
6881012C55	Models H31BBB/BBU Theory/ Maintenance Manual
6881017C55	Models H31BBB/BBU 6W Service Manual

136-174 MHz

6881012C50	Models H23/H33BBB/BBU Operating Instructions
6881012C55	Models H23/H33BBB/BBU Theory/Maintenance Manual
6881012C56	Models H23/H33BBB/BBU 2W & 5W Service Manual
6881020C80	Model Z33BBU1152A Service Manual

SERVICE MANUALS

406-512 MHz

6881012C50	Models H24/H34BBB/BBU Operating Instructions
6881012C55	Models H24/H34BBB/BBU Theory/Maintenance Manual
6881012C58	Models H24/H34BBB/BBU 1.5W & 4W Service Manual
6881015C75	Model Z24BBU3154A Service Manual

IPTS Series

136-174 MHz

6881024C80	Models H33PTU 5W Instruction Manual
6881024C95	Models H33PTU 5W Operating Instructions

406-512 MHz

6881024C70	Models H34PUT 4W Instruction Manual
6881024C95	Models H34PUT 4W Operating Instructions

Power Amplifiers

136-174 MHz

6881020C85	Model N1275A 30-35W Power Amplifier for use with N1248A Converta-Com Consoles, Instruction Manual
6881020C90	Model N1274A 40W Power Amplifier for use with N1248A Converta-Com Consoles, Instruction Manual

Converta-Com

136-174 MHz, 406-512 MHz

6881013C35	Model N1248A Mobile Radio Console, Operating Instructions
6881013C40	Model N1248A Mobile Radio Console, Instruction Manual